

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A method of producing a bipolar fuel cell electrode, comprising:
coating a first side of a collector with a first active material having a first porosity;
compressing the coated first side of the collector at a first pressure;
coating a second side of the collector opposite the first side with a second active material having a second porosity;
and compressing the coated second side of the collector at a second pressure to form a bipolar cell electrode, the second active material coating exhibiting a porosity of about 30% to about 40% after compressing the coated collector at the second pressure.
2. (Original) The method according to claim 1, wherein the first pressure is greater than the second pressure.
3. (Original) The method according to claim 1, wherein the first pressure is from about 200 to about 600 MPa.
4. (Original) The method according to claim 1, wherein the second pressure is from about 10 to about 200 MPa.
5. (Original) The method according to claim 1, wherein the first active material coating exhibits a porosity of about 35% to about 45% after compressing the coated collector at the first pressure.
6. (Cancelled)
7. (Currently Amended) The method according to claim 1, wherein the first active material comprises an anode ~~type~~ active material.

8. (Currently Amended) The method according to claim 7, wherein the [[an]] anode type active material comprises one or more of the group consisting of lithium metal, lithium alloys, complex oxides of lithium and transition metal elements, metal oxides, and carbon.
9. (Original) The method according to claim 1, wherein the first active material further comprises a conductivity enhancement additive.
10. (Original) The method according to claim 9, wherein the conductivity enhancement additive is selected from one or more of the group consisting of acetylene black, carbon black, and graphite.
11. (Original) The method according to claim 1, wherein the first active material further comprises a binder.
12. (Original) The method according to claim 11, wherein the binder is selected from the group consisting of polyvinylidene fluoride and styrene-butadiene rubber.
13. (Original) The method according to claim 1, wherein the first active material further comprises a solid electrolyte.
14. (Original) The method according to claim 13, wherein the solid electrolyte is selected from the group consisting of poly(ethylene)oxide, poly(propylene) oxide, and copolymers thereof.
15. (Original) The method according to claim 1, wherein the first active material further comprises an electrolyte-supporting salt.

16. (Original) The method according to claim 15, wherein the electrolyte-supporting salt is selected from the group consisting of LiPF₆, LiBF₄, LiClO₄, LiAsF₆, LiAlCl₄, Li₂SO₄, LiClO₄, LiCF₃SO₃, Li(CF₃SO₃)₂, and Li(C₂F₅SO₃)₂.

17. (Currently Amended) The method according to claim 1, wherein the second active material comprises a cathode ~~type~~ active material.

18. (Currently Amended) The method according to claim 17, wherein the cathode ~~type~~ active material comprises a chemical compound having a formula of LiM_xN_{1-x}O₂, and wherein M is a first transition metal element, N is a second transition element different from M, and x is a number from 0 to 1.

19. (Currently Amended) The method according to claim 18 claim 17, wherein

the cathode ~~type~~ active material comprises a chemical compound selected from the group consisting of LiMn₂O₄, LiCoO₂, LiCr₂O₇, Li₂CrO₄, LiNiO₂, LiFeO₂, and mixtures thereof.

20. (Currently Amended) A process for producing a bipolar fuel cell electrode, comprising:

coating a first side of a collector with a first material having a characteristic which transforms the coated first side into one of an anode or a cathode after being compressed at a first pressure;

compressing the coated first side of the collector at the first pressure;

coating a second side of the collector with a second material having a characteristic which transforms the coated second side into the other one of the anode or cathode after being compressed at a second pressure that is less than the first pressure; and

compressing the coated second side of the collector at the second pressure, the second material coating exhibiting a porosity of about 30% to about 40% after compressing the coated collector at the second pressure.

21. (Original) A process according to claim 20, wherein the first material coating exhibits a porosity of about 35% to about 45% after compressing the coated collector at the first pressure.
22. (Cancelled)
23. (Original) A bipolar fuel cell electrode produced by the process of claim.
24. (New) The method according to claim 1, wherein the coated first side is formed of a more crush-resistant material than the coated second side, with the coated first side being compressed before the coated second side.
25. (New) A process according to claim 20, wherein the coated first side is formed of a more crush-resistant material than the coated second side, with the coated first side being compressed before the coated second side.